



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: : ATTN: PATENT PUBLICATIONS
Ruiping LIU et al. : Examiner: Kahsay Habte
Serial No.: 10/067,996 ✓ : Group Art Unit: 1624
Filed: February 8, 2002 : Allowed: March 4, 2004
For: PHOSPHODIESTERASE 4 INHIBITORS

REQUEST FOR COMPLETE NOTICE OF ALLOWANCE

MAIL STOP ISSUE FEE
Commissioner for Patents
PO Box 1450
Alexandria VA 22313-1450

Sir:

Attached are copies of Applicants' Information Disclosure Statements and Forms PTO/SB/08A filed April 15, 2002 and February 20, 2004, respectively, copies of which have not yet been returned to applicants with the examiner's initials indicating the references cited therein were considered during the prosecution of the above-identified application. It is respectfully requested that an examiner-initialed copies of Forms PTO/SB/08A be returned to applicants.

Respectfully submitted,

Brion P. Heaney (Reg. No. 32,542)
Attorney for Applicants
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BPH:ack
Filed: April 12, 2004
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MEMORY-0002



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Allen T. Hopper et al.

Serial No.: 10/067,996

Group Art Unit: Unassigned

Filed: February 8, 2002

Examiner: Unassigned

For: PHOSPHODIESTERASE 4 INHIBITORS

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §§ 1.56, 1.97 and 1.98

Assistant Commissioner for Patents
Washington, D. C. 20231

COPY

Sir:

CITED MATERIALS

Applicant(s) hereby disclose the information listed in the attached form PTO-1449.

- ☐ Copies of materials listed but not attached were cited in parent application Serial No. ____; see 37 C.F.R. § 1.98(d).
- ☐ Copies of materials listed but not attached were cited in an International Search Report dated ____; receipt of the International Search Report and copies of references was confirmed by the PCT International Division of the U.S. PTO in the Notice of Acceptance mailed ____.

ADDITIONAL INFORMATION

LANGUAGE

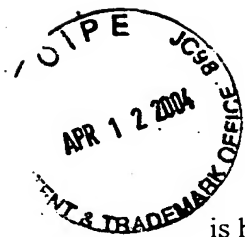
- ☐ All listed materials are in the English language; see 37 C.F.R. § 1.98.
- ☐ Non-English language references:
 - ☐ The reference(s): _____ in the English-language is (are) indicated by commercial data bases to correspond to the reference(s): _____, respectively.
 - ☐ (An) English-language translation(s) of the references: _____ is (are) provided.
 - ☐ A commercial English-language abstract of reference(s) _____ is (are) provided.
 - ☐ An English-language search report or an equivalent paper from a foreign patent office translated into English in pertinent part in connection with a counterpart foreign application, is provided indicating the relevance of the cited reference(s).

FEES

- ☒ No fee is required for this Information Disclosure Statement because:
 - ☒ This Information Disclosure Statement is being filed within three months of the filing date of a national application (other than a CPA) under § 1.53(d) or within 3 months of the date of entry of the national stage under § 1.491 in an international application;
 - ☒ This Information Disclosure Statement is being filed before the mailing of a first action on the merits;
 - ☐ This Information Disclosure Statement is being filed after a first action on the merits but before the mailing date of any of a final action under § 1.113, a notice of allowance under § 1.311, or an action that closes prosecution in the application, and is accompanied by a certification below.
 - ☐ This Information Disclosure Statement is filed under 37 C.F.R. § 1.97(i).
- ☐ A fee is required for this Information Disclosure Statement:
 - ☐ This Information Disclosure Statement is being filed after a first action on the merits but before the mailing date of any of a final action under § 1.113, a notice of allowance under § 1.311 or an action that closes prosecution, and is accompanied by the fee set forth in § 1.17(p).
 - ☐ This Information Disclosure Statement is being filed after the mailing date of a final rejection or a notice of allowance under § 1.311 or an action that closes prosecution, but before the payment of the issue fee, and is accompanied by the fee set forth in § 1.17(p) and a certification below.

CERTIFICATION

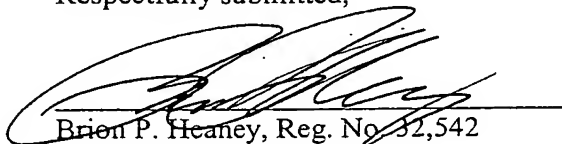
- ☐ Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned, having made reasonable inquiry, no such item was known to any individual designated in 37 CFR § 1.56(c), more than three months prior to the filing of this statement.



DEPOSIT ACCOUNT

If a fee is due, attached is a check in the amount of \$_____. However, the Commissioner is hereby authorized to charge fees under 37 CFR § 1.16 and § 1.17 which may be required to facilitate this filing, or credit any overpayment to Deposit Account #13-3402, two copies of this paper are attached for this purpose.

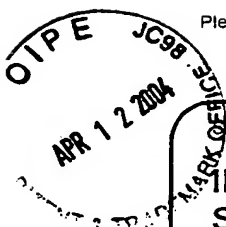
Respectfully submitted,


Brian P. Heaney, Reg. No. 32,542
Attorney/Agent for Applicants

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Attorney Docket No.: MEMORY-2

Date: April 15, 2002
BPH:cas



Please type a plus sign (+) inside this box → +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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<p>Substitute for form 1449A/PTO</p> <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;">(use as many sheets as necessary)</p> <div style="display: flex; justify-content: space-between;"><div>Sheet 2 of 2</div><div style="border: 1px solid black; padding: 2px;">Complete if Known<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%;">Application Number</td><td>10/067,996</td></tr><tr><td>Filing Date</td><td>February 8, 2002</td></tr><tr><td>First Named Inventor</td><td>Allen T. Hopper</td></tr><tr><td>Group Art Unit</td><td>Unassigned</td></tr><tr><td>Examiner Name</td><td>Unassigned</td></tr><tr><td>Attorney Docket Number</td><td>MEMORY-2</td></tr></table></div></div>		Application Number	10/067,996	Filing Date	February 8, 2002	First Named Inventor	Allen T. Hopper	Group Art Unit	Unassigned	Examiner Name	Unassigned	Attorney Docket Number	MEMORY-2
Application Number	10/067,996												
Filing Date	February 8, 2002												
First Named Inventor	Allen T. Hopper												
Group Art Unit	Unassigned												
Examiner Name	Unassigned												
Attorney Docket Number	MEMORY-2												

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	A30	THOMAS C. MCKENZIE et al., "The Gomberg-Bachmann Reaction of Purines", <u>J. Heterocyclic Chem.</u> , May-Jun 1987, pp. 859-861, Vol. 24	
	A31	VASU NAIR et al., "Novel, Stable Congeners of Antiretroviral Compound 2', 3'- Dideoxyadenosine," <u>J. Am. Chem. Soc.</u> , 1989, pp. 8502-8504, Vol. 111	
	A32	VASU NAIR et al., "Synthesis Of Congeners Of Adenosine Resistant To Deamination By Adenosine Deaminase," <u>J. Chem. Soc Comm.</u> , 1989, pp. 878-879	
	A33	JAMES L. KELLEY et al., "Synthesis and Structure- Activity Relationships of 2-Substituted-6- (dimethylamino)- 9- (4-methylbenzyl)-9H-purines with Antirhinovirus Activity," <u>J. Med. Chem.</u> , 1989, pp. 218-224, Vol. 32	
	A34	JAMES E. KELLEY et al., "Antirhinovirus structure-activity relationships of 6-substituted-9-(4-methylbenzyl)-2-trifluoromethyl-9H-purines," <u>Eur. J. Med. Chem.</u> , 1990, pp. 131-135, Vol. 25	
	A35	ROGER J. SCHILLING et al., "A High-Throughput Assay For Cyclic Nucleotide Phosphodiesterases," <u>Analytical Biochemistry</u> , 1994, pp.154-158, Vol. 215	
	A36	DONALD V. DANIELS et al., "A Semiautomated Method for the Assay of Cyclic Adenosine 5'-Monophosphate Phosphodiesterase," <u>Analytical Biochemistry</u> , 1996, pp. 367-369, Vol. 236	
	A37	JEAN-JACQUES BOURGUIGNON et al., "9-Benzyladenines: Potent and Selective cAMP Phosphodiesterase Inhibitors," <u>J. Med. Chem.</u> , 1997, pp. 1768-1770, Vol. 40	
	A38	JAMES L. KELLEY et al., "6-(Alkylamino)-9-alkylpurines. A New Class of Potential Antipsychotic Agents," <u>J. Med. Chem.</u> , 1997, pp. 3207-3216, Vol. 40	
	A39	HIROYUKI SAWANISHI et al., "Selective Inhibitors of Cyclic AMP-Specific Phosphodiesterase: Heterocycle-Condensed Purines", <u>J. Med. Chem.</u> , 1997, pp. 3248-3253, Vol. 40	
	A40	J.E. SOUNNES et al., "Proposal for Pharmacologically Distinct Conformers of PDE4 Cyclic AMP Phosphodiesterases", <u>Cell Signal</u> , 1997, pp. 227-236. Vol. 9, No. 3-4	
	A41	MARY ELIZABETH BACH et al., "Age-related defects in spatial memory are correlated with defects in the late phase of hippocampal long term potentiation <i>in vitro</i> and are attenuated by drugs that enhance the cAMP signaling pathway", <u>Proc. Natl. Acad. Sci. USA</u> , April 1999, pp.5280-5285, Vol. 96	
	A42	ELISABETH BOICHOT et al., "Anti-Inflammatory Activities of a New Series of Selective Phosphodiesterase 4 Inhibitors Derived from 9- Benzyladenine," <u>The Journal Of Pharmacology And Experimental Therapeutics</u> , 2000, pp. 647-653, Vol 292, No.2	

Examiner Signature	Date Considered
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* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



COPY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Allen T. Hopper et al.

Serial No.: 10/067,996

Group Art Unit: 1624

Filed: February 8, 2002

Examiner: Kahsay Habte

For: PHOSPHODIESTERASE 4 INHIBITORS

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §§ 1.56, 1.97 and 1.98

Commissioner for Patents
P.O. Box 1450
ALEXANDRIA, VA 22313-1450

Sir:

This information disclosure statement is made in accordance with 37 C.F.R. §§ 1.56, 1.97 and 1.98 as follows:

Timing and Fees

- ☐ Under 37 C.F.R. § 1.97(b), no fee or statement is required for filing this information disclosure statement is filed:
- ☐ within three months of the filing date of a national application other than a CPA under § 1.53(d);
 - ☐ within three months of the actual filing date of the national phase of a PCT application; OR
 - ☐ before the mailing of a first substantive office action (including after filing of an RCE).
- ☐ Under 37 C.F.R. § 1.97(c), this information disclosure statement is filed after the periods specified in 37 C.F.R. § 1.97(b), but before the mailing date of:
- ☐ a final rejection under 37 C.F.R. 1.113;
 - ☐ termination of prosecution, e.g. Ex Parte Quayle, M.P.E.P § 609(B)(2); OR
 - ☐ a notice of allowance under 37 C.F.R. § 1.311; and

is accompanied by:

- ☐ the statement as specified in 37 C.F.R. § 1.97(e) set out below; OR
- ☐ a check covering the fee of \$180.00 under 37 C.F.R. § 1.17(p).
- ☒ Under 37 C.F.R. § 1.97(d), this information disclosure statement is filed after the mailing date of the following actions which have not been withdrawn:
 - ☒ a final action under 37 C.F.R. § 1.113;
 - ☐ termination of prosecution, e.g. Ex Parte Quayle, M.P.E.P § 609(B)(2); OR
 - ☐ a notice of allowance under 37 C.F.R. § 1.311;

AND is filed on or before payment of the issue fee; AND is accompanied by:

- ☒ the statement as specified in 37 C.F.R. § 1.97(e) as set forth below, and the fee of \$180.00 under 37 C.F.R. § 1.17(p).

Statements Under 37 C.F.R. 1.97(e)

- ☒ Each item of information contained in this information disclosure statement was a first cited in a communication from a foreign patent office in a counterpart foreign application having a mailing date not more than three months prior to the filing date of this information disclosure statement; or
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and to the knowledge of the undersigned attorney after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing date of the information disclosure statement.

Cited Materials

- ☐ Copies of materials listed but not attached were cited in benefit (35 U.S.C. § 120) ancestor application Serial No. _____, on Form 892 by the Examiner and/or Form 1449 by the applicant; see 37 C.F.R. § 1.98(d).
- ☒ The materials listed were cited in international search reports dated December 12, 2003 and January 1, 2004.
- ☒ Copies of the materials listed are attached.

Non-English Language References

- ☒ English-language search reports or equivalent paper from a foreign patent office is provided indicating the relevance of the cited reference(s).
- ☐ A foreign-language search report from a foreign patent office is provided, and pertinent parts are translated substantively below:
- X = document of particular relevance when it is taken alone
Y = document of particular relevance when it is combined with another such document
A = document defining the general state of the art
O = non-written disclosure
P = intercalated document
T = document cited to understand the theory or principle underlying the invention
E = patent document which has the benefit of a date earlier than the filing date and which was published only on or after this filing date
D = cited in the application
L = cited for another reason
& = publication of member of same patent family
- ☐ Translation of other relevant information on foreign search report

Other Information

Enclosed is a copy of the partial International Search Report from International Application PCT/US 03/24914, which corresponds to related copending US Patent Application Serial No. 10/636,979. All of the references cited in the above-mentioned partial International Search Report are of record in the instant application except for WO 02/098878 and the article by Martin et al. WO '878 is the PCT publication of the International application corresponding to the instant application.

Also enclosed is a copy of the Search Report from International Application PCT/US 03/24676, which corresponds to related copending US application 10/636,996. All of the references listed in this International Search Report are of record in the instant application, except for the Abstract of JP 05-001066, the Abstract of JP 62-240622, the Abstract of JP 62-010085, EP 1043324 and WO 02/098878.

Payment of Fees Due (If Any):

- ☒ A check for \$180.00 covering the fee identified above is attached.

☐ Please charge to Deposit Account No. 13-3402 \$_____ for the fee identified above.

☒ The Commissioner is hereby authorized to charge or credit any overpayment to Deposit Account #13-3402, two copies of this paper are attached for this purpose.

Respectfully submitted,

Brion P. Heaney, Reg. No. 32,542
Attorney/Agent for Applicants

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Attorney Docket No.: MEMORY 2

Date: February 20, 2004

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known

Application Number	10/067,996
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First Named Inventor	Allen T. Hopper
Group Art Unit	1624
Examiner Name	Kahsay Habte
Attorney Docket Number	MEMORY-2

Sheet	1	of	2
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[illegible][illegible]

Date Considered

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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PTO/SB/08A (08-00)

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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

Complete if Known

Application Number	10/067,996
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Examiner Name	Kahsay Habte
Attorney Docket Number	MEMORY-2

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Japanese Patent Abstract No. 05-001066 dated January 8, 1993	
		Japanese Patent Abstract No. 62-240622 dated October 21, 1987	
		Japanese Patent Abstract No. 62-010085 dated January 19, 1997	
		T. J. Martin, "PDE4 Inhibitors - A Review of the Recent Patent Literature", IDrugs, Vol. 4, No. 3, 2001, pgs 312-338.	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered.
Include copy of this form with next communication to applicant.

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